

PATENT
Attorney Docket No. 003-007-C4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
JOHN W. SLIWA, *et al.*) Examiner: Unassigned
Application No.: Unassigned) Art Unit: Unassigned
Filed: Herewith)
For: METHODS AND DEVICES)
FOR ABLATION)

)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the subject application as indicated below.

IN THE SPECIFICATION:

Please delete the first paragraph and insert the following corrected paragraph:

--The present application is a continuation of U.S. Patent Application 09/884,435, filed June 19, 2001, which is a continuation-in-part of Application Serial No. 09/614,991, filed July 12, 2000, which is a continuation-in-part of Application Serial No. 09/507,336 filed February 18, 2000 which is a continuation-in-part of Application Serial No. 09/356,476, filed July 19, 1999, which is a continuation-in-part of Application Serial No. 09/157,824, filed September 21, 1998, which is a continuation-in-part of Application Serial No. 08/943,683, filed October 15, 1997, which is a continuation-in-part of Application Serial No. 08/735,036, filed October 22, 1996, the full disclosures of which are incorporated herein by reference.--

IN THE CLAIMS:

Please delete claims 1 through 60 in this application and add the following new claims:

--61. A method of ablating a cardiac tissue, comprising the steps of:
providing an ablating device having a first transducer and a second transducer;
positioning the ablating device against cardiac tissue;
activating the first transducer at a first frequency to ablate cardiac tissue; and
activating the second transducer at a second frequency to ablate cardiac tissue.

62. The method of claim 61, further comprising the step of:
moving the ablating device so that the activating steps are carried out to ablate the same cardiac tissue.

63. The method of claim 61, wherein:
the activating steps are carried out to ablate different cardiac tissue.

64. The method of claim 61, further comprising:
characterizing at least a portion of the cardiac tissue; and
selecting at least one of the first and second transducers to ablate the at least portion of the cardiac tissue based upon the characterizing step.

65. A method of ablating a cardiac tissue, comprising the steps of:
providing an ablating device having a first transducer and a second transducer, the first and second transducers both being focused, the first and second transducers having different focal lengths;
positioning the ablating device against cardiac tissue;
activating the first transducer to ablate cardiac tissue; and
activating the second transducer.

66. The method of claim 65, wherein:

the providing step is carried out with the first transducer having a first focal length and the second transducer has a second focal length different than the first focal length.

67. The method of claim 65, wherein:

the providing step is carried out with the ablating device having a body, the first and second transducers being movable along the body.

68. The method of claim 67, wherein:

the providing step is carried out with the first and second transducers being slidable along the body.

68. The method of claim 67, further comprising the step of:

positioning the body at a selected location on an epicardial surface; and moving the first and second transducers after the positioning step.

70. A device for ablating tissue, comprising:

a body;

a source of focused ultrasound mounted to the body, the focused ultrasound having a focus; and

a flexible membrane filled with a substance which receives the focused ultrasound and transmits the ultrasound energy to the tissue.

71. The device of claim 70, wherein:

the flexible membrane is inflatable to move the focus relative to the tissue to be ablated.

72. The device of claim 70, wherein:

the flexible membrane tilts the body when inflated.

73. The device of claim 70, wherein:

the source of focused ultrasound includes an ultrasound transducer.

74. A system for ablating tissue with ultrasound energy, comprising:
an ablating element which emits ultrasound energy;
a control system coupled to the ablating element, the control system controlling
activation of the ablating element to automatically change a characteristic of the ablating element
when ablating the same tissue structure during a first time period and a second time period.

75. The system of claim 74, wherein:
the control system is configured to automatically change a frequency of the
ablating element.

76. The system of claim 74, wherein:
the control system is configured to automatically change the power of the ablating
element.

77. The system of claim 74, wherein:
the ablating element emits focused ultrasound which is focused in at least one
direction.

78. The system of claim 74, wherein:
the control system automatically moves the focus relative to the tissue structure
being ablated.

79. The system of claim 77, wherein:
the control system moves the focus closer to a near surface of the tissue structure
being ablated.

80. The method of claim 74, wherein:
the control system includes means for assessing the adequacy of contact between
the device and the tissue structure being ablated.

81. The method of claim 78, wherein:
the assessing means is carried out by measuring an electrical impedance.--

CONCLUSION

Claims 61 through 81 are pending in this application.

Attached is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned with "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

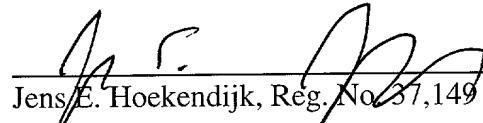
If a telephone interview would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (415) 412-3322.

Please charge any required fees, including any necessary extension-of-time fees, or credit any overpayment to Deposit Account No. 50-1247.

Respectfully submitted,

Date November 2, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

The present application is a continuation of U.S. Patent Application 09/884, 435, filed June 19, 2001, which is a continuation-in-part of Application Serial No. 09/614,991, filed July 12, 2000, which is a continuation-in-part of Application Serial No. 09/507,336 filed February 18, 2000 which is a continuation-in-part of Application Serial No. 09/356,476, filed July 19, 1999, which is a continuation-in-part of Application Serial No. 09/157,824, filed September 21, 1998, which is a continuation-in-part of Application Serial No. 08/943,683, filed October 15, 1997, which is a continuation-in-part of Application Serial No. 08/735,036, filed October 22, 1996, the full disclosures of which are incorporated herein by reference.